

ABSTRACT

5 A method of chemically cleaning normally immersed  
suction driven filtering membranes involves backwashing a chemical  
cleaner through the membranes while the tank is empty in repeated pulses  
10 in which the chemical cleaner is pumped to the membranes separated by  
waiting periods in which chemical cleaner is not pumped to the  
membranes. The duration and frequency of the pulses is preferably chosen  
to provide an appropriate contact time of the chemical, preferably without  
allowing the membranes to dry between pulses and without using excessive  
15 amounts of chemical. In other aspects, such membranes preferably used for  
filtering water to produce potable water in a batch process are backwashed  
with a chemical cleaner substantially at the same time as the tank is being  
drained. The chemical cleaner is optionally supplied in pulses. In other  
aspects, chemical cleaner backwashes are started before the membranes foul  
20 significantly and are repeated at least once per week to reduce the rate of  
decline in the permeability of the membranes so that intensive recovery  
cleaning is required less frequently. When performed in situ, each cleaning  
event comprises (a) stopping permeation and any agitation of the  
membranes, (b) backwashing the membranes with a chemical cleaner in  
repeated pulses and (c) resuming agitation, if any, and permeation. The  
pulses last for between 10 seconds and 100 seconds and there is a time  
between pulses between 50 seconds and 6 minutes. Each cleaning event  
typically involves between 5 and 20 pulses.

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